

Appl. No. 09/856,335
Amult. dated September 29, 2003
Reply to Office action of March 28, 2003

REMARKS/ARGUMENTS

In the present Office action, claims 1-35 were examined. Claims 2-9, 15-21, 23, 25-27 and 29-31 were withdrawn from consideration. Claims 1, 10-14, 24, 28 and 32-35 were rejected. Claims 1, 10, 28, 34 and 35 have been amended. Claims 11 and 13 are cancelled without prejudice or disclaimer. No new matter has been added. Claims 1, 10, 12, 14, 24, 28, and 32-35 are believed to be in condition for allowance.

Claim Objections

The Examiner recited numerous objections with reference to claims 11 and 13. Claims 11 and 13 have been cancelled herein rendering the Examiner's grounds for objections moot.

Claim Rejections under 35 U.S.C. 112

The Examiner rejected claims 10, 13-14, 28 and 34-35 for failing to particularly point out and distinctly claim the subject matter of the present invention. With respect to claim 10, the Examiner noted that the language "powder fed" was vague and indefinite and that "the spray flame" lacks antecedent basis. As amended herein, claim 10 no longer suffers from these deficiencies. The Examiner further rejected claim 13. As claim 13 has been cancelled herein, the Examiner's grounds for rejection with respect to claim 13 are rendered moot. With respect to claim 28, the Examiner noted that the language "thermal spraying" is vague and indefinite. As amended herein, claim 28 no longer recites the vague and indefinite language. The Examiner noted numerous instances of vague and indefinite language with respect to claims 34 and 35. Claims 34 and 35 have been amended herein to remove this offensive language with two notable

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exceptions. Specifically, it remains Applicant's contention that "high-powered flame spraying" and "high-speed flame spraying" are common technical terms. Enclosed in our submission of August 28, 2003 were numerous print-outs from internet pages wherein the aforementioned terms are mentioned. As a result of these amendments and cancellations, Applicant respectfully submits that the Examiner's grounds for rejection with respect to claims 10, 13-14, 28 and 34-35 are traversed. These claims are therefore believed to be in condition for allowance.

Claim Rejections under 35 U.S.C. 103

The Examiner rejected claims 1, 10, 12-14, 24, 28 and 32-34 as being unpatentable over Inoue et al. in view of Savkar et al. The Examiner further noted that while Applicant has previously argued that Inoue et al. and Savkar et al. do not teach or suggest the thin uniform magnetite layer of the present invention, the present claims do not require either a thin or uniform layer. Claim 1, as amended, now recites "to produce a homogeneous and thin layer of $\leq 250 \mu\text{m}$ ". Support in the specification for this language is as follows. Support for the notion of a "homogenous layer" may be found on page 1, line 24; page 2, line 9 and page 4, line 11 of the original specification. Furthermore, the homogenous layer may be further deduced from the fact that the deposited layer of Examples 1, 2 and 4 is ground after thermal spraying (page 10, line 18; page 11, lines 7-10 and page 12, line 29). The recitation of a thickness of the layer less than $250 \mu\text{m}$ is supported in two ways. Firstly, the deposited layer has a thickness of between 0.2 and .5 mm (200 to $500 \mu\text{m}$, see page 9, line 28). The value of $250 \mu\text{m}$, as recited in amended claim 1 lays within the mentioned interval. Additionally, the deposited layer of Example 1 is ground after deposition (page 10, line 18), which means that the thickness of the layer is further reduced.

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Secondly, the material layer deposited according to the present invention has to have a height of at least two mono-layers, otherwise there would be no need for a controlled deposition of the particles as described for example in originally filed claim 16. The grain size of the powder-spray material, however, is described to lie between 0.05 and 150 μm , preferably between 0.1 and 120 μm (as recited in originally filed claim 12). Therefore, a layer having a thickness of two mono-layers, where the mono-layers have the maximum grain size as specified in originally filed claim 12, would have an upper limit of 250 μm for its thickness.

Additional support for the proposition that the deposited layer has to have a thickness of at least two mono-layers can be found in the wording of paragraph 5, page 3, lines 22-29. In this paragraph it is stated that online-monitoring may measure the rise in temperature of the layer and the substrate during the spraying operation (lines 25, 26) which is only possible if there is already a layer present on the substrate, and there is still an ongoing material deposition. Lastly, a layer having a thickness of 250 μm or less is considered to be a "thin layer" by a person skilled in the art when it comes to surface coatings of mechanical parts.

As a result of this amendment, Applicant respectfully traverses the Examiner's grounds for rejection. Claim 1 is therefore believed to be in condition for allowance. As claims 10, 12-14, 24, 28 and 32-34 depend upon claim 1, claim 1 now believed to be in condition for allowance, these claims likewise are believed to be in condition for allowance.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the

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Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any additional fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,

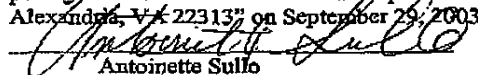
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on September 29, 2003.


Antoinette Sullo